tion. An attempt to discover for the dissolved state a law equivalent to Trouton's law for the gaseous state. Calling $\rho$ the molecular latent heat of solution and T the temperature which corresponds for the state of saturation to an osmotic pressure of one atmosphere, $\rho/T$ should be constant if an analogous relation holds. For various salts in solution this ratio has a value of about 32.—J. **Meunier**: The principles of analysis by means of reducing flames; the detection of traces of manganese in the presence of iron or other substances. The material in the form of powder is carried away as dust in a stream of hydrogen which is ignited and the flame examined spectroscopically.—L. **Forsén**: The constitution and systematic representation of the complex derivatives of the molybdic acids.—R. **Fosse** and G. **Laude**: Syntheses of cyanic acid and urea by the oxidation in alcoholic ammoniacal solution of phenols and aldehydes. The production of ammonium cyanate and urea by the oxidation of ammonia and alcohols is favoured by the presence of copper. Thus with ethyl alcohol the yield of urea is increased from 0·85 to 8·32 grams per 100 c.c. of alcohol by the addition of copper salts. Details of the amounts of urea obtained are given for various alcohols, phenols, and aldehydes.—M. **Godchot**: Some derivatives of thuyamenthone.—O. **Bailly**: The action of epichlorohydrin on disodium hydrogen phosphate in aqueous solution and the stability of a monoglyceromonophosphoric ester.—A. **Mailhe**: The preparation of the amines of secondary alcohols. The method of reduction of ketazines by hydrogen in presence of reduced nickel described in an earlier communication has been extended to ketazines of the formula $R\cdot CO\cdot R'$. Several new primary and secondary amines have been prepared.—P. **Gaubert**: The interference colours produced by thin crystalline plates.—A. **Briquet**: The low country of Picardy north of the Somme: the existing shore-line.—R. **Dongier**: The simultaneous oscillations of temperature and wind at the top of the Eiffel Tower and their relation with the Bjerknes steering surface of a depression. Two temperature charts on different days are given, showing the variations of temperature at the summit of the tower and at three lower levels; the variations of the velocities of the wind at the summit are also shown. The diagrams prove the existence of a current of warm air set in motion above the colder layers by forces always present in a depression. This is in good agreement with the views of Bjerknes on the structure of cyclones in movement.—M. **Delcambre**: A case of sudden filling of an atmospheric depression.—R. **Souèges**: The embryogeny of the Scrofulariaceæ: development of the embryo in *Veronica arvensis*.—P. **Nobécourt**: The action of some alkaloids on *Botrytis cinerea*.—Mlle. D. **Kohler**: The variation of organic acids in the course of anthocyanic pigmentation. Details of experiments proving that anthocyanic pigmentation is not accompanied by an increase in the amount of organic acids.—E. **Couvreur** and X. **Chahovitch**: A natural mode of defence against microbe infections in the invertebrates. Micro-organisms (pyocyanic and coli bacilli) are destroyed by the blood and digestive fluids of certain invertebrates.—A. **Thooris**: The morphological classification of fifty champion athletes. Metric verification by radioscopy.—L. **Mercier**: *Apterina pedestris*. The flight muscles in certain Diptera, wingless or with rudimentary wings.—A. **Lécaillon**: The action exerted by concentrated sulphuric acid on the eggs of *Bombyx mori*.—H. **Drouin**: Changes in the absorption by skin and muscular tissue brought about by the addition of lipoids to stannous solutions.—W. **Kopaczewski**: A simple apparatus for measuring surface tension.—G. **Blanc**: Experimental researches on the virus of herpes.

## Books Received.

Artificial Light: Its Influence upon Civilization. By M. Luckiesh. (Century Books of Useful Science.) Pp. xiv+366. (London: University of London Press, Ltd.) 12*s.* 6*d.* net.

Creative Chemistry: Descriptive of Recent Achievements in the Chemical Industries. By Dr. Edwin C. Slosson. (Century Books of Useful Science.) Pp. xvi+311. (London: University of London Press, Ltd.) 12*s.* 6*d.* net.

Field Methods in Petroleum Geology. By Dr. G. H. Cox and others. Pp. xiv+305+xi plates. (New York and London: McGraw-Hill Book Co., Inc.) 24*s.* net.

The Chemistry of Plant Life. By Dr. Roscoe W. Thatcher. (Agricultural and Biological Publications.) Pp. xvi+268. (New York and London: McGraw-Hill Book Co., Inc.) 18*s.* net.

The Fauna of British India, including Ceylon and Burma. Mollusca, iii.: Land Operculates (Cyclophoridæ, Truncatellidæ, Assimineidæ, Helicinidæ). By G. K. Gude. Pp. xiv+386. (London: Taylor and Francis; Calcutta: Thacker, Spink and Co.; Bombay: Thacker and Co., Ltd.) 35*s.*

Thoughts of a Nature Lover. By Kenneth Rogers. Pp. 125. (London: Holden and Hardingham, Ltd.) 5*s.* net.

Municipal Engineering: Surveying the Scope of Municipal Engineering and the Statutory Position, the Appointment, the Training, and the Duties of a Municipal Engineer. By H. Percy Boulnois. (Pitman's Technical Primers.) Pp. vii+103. (London: Sir I. Pitman and Sons, Ltd.) 2*s.* 6*d.* net.

The Essentials of Mental Measurement. By Dr. William Brown and Prof. Godfrey H. Thomson. (Cambridge Psychological Library.) Pp. x+216. (Cambridge: At the University Press.) 21*s.* net.

A Short Manual of Forest Management. By H. Jackson. Pp. x+70. (Cambridge: At the University Press.) 7*s.* net.

Board of Education. Illustrated Catalogue of the Collections in the Science Museum, South Kensington, with Descriptive and Historical Notes: Machine Tools. Pp. 61+iii plates. (London: H.M. Stationery Office.) 1*s.* net.

Transactions of the Royal Society of Edinburgh. Vol. lii., part iv., No. 29. Isle of Wight Disease in Hive Bees. Pp. 737–79. (Edinburgh: R. Grant and Son; London: Williams and Norgate.) 9*s.*

Geological Survey of Nigeria. Bulletin No. 1: The Geology of the Plateau Tin Fields. By Dr. J. D. Falconer. Pp. 55+x plates. (Nigeria.) 10*s.* net.

Medical Research Council and Department of Scientific and Industrial Research. Reports of the Industrial Fatigue Research Board, No. 11. Preliminary Notes on Atmospheric Conditions in Boot and Shoe Factories. (Boot and Shoe Series, No. 2.) Pp. 69. (London: H.M. Stationery Office.) 3*s.* net.

A New British Flora: British Wild Flowers in their Natural Haunts. Described by A. R. Horwood. Vol. iii. Pp. xi+251+xviii–xxxi plates. Vol. iv. Pp. xi+257+xxxii–xlix plates. (London: Gresham Publishing Co., Ltd.) 12*s.* 6*d.* net each vol.

Bibliographie des Livres Français de Médecine et de Sciences. Publiée par la Section de Médecine du Syndicat des Editeurs. 1908–20. Pp. xiii+146. (Paris.)

Legislative Assembly, New South Wales. Report of the Director-General of Public Health, New South Wales, for the year 1919, including a Report on the Influenza Epidemic, 1919. Pp. v+272+x plates. (Sydney: W. A. Gullick.) 6*s.* 9*d.*

Universities and their Freedom. By W. M. Childs. Pp. 56. (London: A. L. Humphreys.) 2*s.* net.

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Joseph Glanvill and Psychical Research in the Seventeenth Century. By H. Stanley Redgrove and I. M. L. Redgrove. Pp. 94. (London: W. Rider and Son, Ltd.) 2*s.* 6*d.* net.

Report of the Ninth Annual Conference of Educational Associations held at the University College, London, 1921. Pp. viii+470. (London: Conference Committee, 9 Brunswick Square, W.C.1.) 5*s.*

The Electro-Deposition of Copper and its Industrial Applications. By Claude W. Denny. (Pitman's Technical Primers.) Pp. xii+108. (London: Sir I. Pitman and Sons, Ltd.) 2*s.* 6*d.* net.

## Diary of Societies.

### *THURSDAY*, April 7.

Royal Institution of Great Britain, at 3.—C. T. R. Wilson: Thunderstorms (Tyndall Lectures).

Linnean Society, at 5.—Reginald A. Malby: A Miniature Alpine Garden from January to December.—H. W. Monckton: Exhibition of Various Forms of *Taraxacum erythrospermum*, Andrz.

Child-Study Society (at Royal Sanitary Institute), at 6.—M. Dainow: Original Research in Vocational Tests.

Institution of Electrical Engineers (at Institution of Civil Engineers), at 6.—K. Baumann: Some Recent Developments in Steam Turbine Practice.

Chemical Society (at Institution of Mechanical Engineers), at 8.—Dr. F. W. Aston: Mass Spectra and Atomic Weights.

### *FRIDAY*, April 8.

Royal Astronomical Society, at 5.—E. A. Milne: Radiative Equilibrium and Spectral Distribution.—E. A. Milne: Radiative Equilibrium in the Outer Layers of a Star: The Temperature Distribution and the Law of Darkening.—Prof. H. H. Turner: Note on Barnard's Observations of Nova Ophiuchi No. 2 (Hind, 1848) and of Nova Persei No. 2 (Anderson, 1901).—Guido Horn d'Arturo: A Spiral Nebula in the Northern Hemisphere of the Milky Way.—Major W. J. S. Lockyer and D. L. Edwards: The Spectrum of $\phi$ Cassiopeiæ in Relation to those of $\alpha$ Cygni and $\gamma$ Cygni.—Rev. A. L. Cortie: The Ultra-violet Spectrum of Nova Aquilæ 1918 June 10.—Sir W. H. M. Christie: Observations of the Moon, Saturn, etc., made at Prof. W. H. Pickering's Observatory in Jamaica.

Physical Society of London (at Imperial College of Science), at 5.—Dr. W. J. H. Moll: A New Registering Microphotometer.—Sir William Bragg: The Examination of the Structure of Crystals in the Form of Powder by Means of the Ionisation Spectrometer.—H. Parry: A Balance Method of Using the Quadrant Electrometer for the Measurement of Power.

Royal Society of Medicine (Clinical Section), at 5.30.—Dr. Ivor Davies: Hair Ball or Hair Cast of the Stomach and Gastro-Intestinal Tract. A Report of Two Cases with Specimens, and an Abstract of 108 Cases from the Literature.—Dr. M. Cassidy: Report *re* Case of Neoplasm of Lung.

Royal Institution of Great Britain, at 9.—Dr. R. H. A. Plimmer: Quality of Protein in Nutrition.

### *SATURDAY*, April 9.

Royal Institution of Great Britain, at 3.—Dr. H. H. Dale: Poisons and Antidotes.

### *MONDAY*, April 11.

Royal Geographical Society (at Lowther Lodge), at 5.—E. Heawood: The World-Map before and after Magellan's Voyage.

Institution of Electrical Engineers (Informal Meeting) (at Chartered Institute of Patent Agents), at 7.—F. Creedy and Others: Some Characteristics and Applications of Multispeed A.C. Motors.

Institution of Mechanical Engineers (Graduates' Meeting), at 7.—L. H. Bedford: Electrolysis as Applied to Engineering.

Surveyors' Institution, at 8.—L. S. Wood: The Forestry Directorate in France.

Royal Society of Arts, at 8.—Dr. S. J. Lewis: Recent Applications of the Spectroscope and the Spectrophotometer to Science and Industry.

### *TUESDAY*, April 12.

Royal Institution of Great Britain, at 3.—Prof. R. A. Sampson: The Measurement of Starlight.

Royal College of Physicians of London, at 5.—Dr. T. Lewis: Observations upon the Nature of Auricular Flutter and Fibrillation (Oliver-Sharpey Lecture).

Royal Photographic Society of Great Britain, at 7.—H. M. Lomas: Problems of Kinematography.—R. J. Trump: A Shutterless Continuous Feed Kinematograph.

Quekett Microscopical Club, at 7.30.

Royal Aeronautical Society (at Royal Society of Arts), at 8.—Major G. I. Taylor: Annual Wilbur Wright Lecture.

Royal Anthropological Institute, at 8.15.—L. H. Dudley Buxton: The Ancient and Modern Inhabitants of Malta.

### *WEDNESDAY*, April 13.

Royal Society of Medicine, at 5.—Sir Thomas Horder, Mr. Clayton-Greene, Sir Berkeley Moynihan, Dr. D. Pennington, A. Evans, and Others: The Problems For and Against Team Work in this Country.

Royal Society of Medicine (Proctology Sub-section), at 5.—Mr. Lockhart-Mummery, Sir Charles Gordon-Watson, and Others: Pruritus Ani.

Royal Society of Arts, at 8.—Prof. H. E. Armstrong: Low Temperature Carbonisation and Smokeless Fuel.

Institution of Automobile Engineers (at Institution of Mechanical Engineers), at 8.—G. Watson: A Suggested Programme for Automobile Research.

### *THURSDAY*, April 14.

Royal Institution of Great Britain, at 3.—C. T. R. Wilson: Thunderstorms (Tyndall Lectures).

Royal Society, at 4.30.—*Probable Papers.*—Prof. K. Onnes, Sir Robert Hadfield, and Dr. H. R. Woltjer: The Influence of Low Temperatures on the Magnetic Properties of Alloys of Iron with Nickel and Manganese.—C. N. Hinshelwood and E. J. Bowen: The Influence of Physical Conditions on the Velocity of Decomposition of Certain Crystalline Solids.—N. K. Adam: The Properties and Molecular Structure of Thin Films of Palmitic Acid on Water. Part I.—E. P. Metcalfe and B. Venkatesachar: The Absorption of Light by Electrically Luminescent Mercury Vapour.

Royal College of Physicians of London, at 5.—Dr. T. Lewis: Observations upon the Nature of Auricular Flutter and Fibrillation (Oliver-Sharpey Lecture).

Institution of Electrical Engineers (at Institution of Civil Engineers), at 6.—E. A. Watson: Magnetos for Ignition Purposes in Internal Combustion Engines.

Oil and Colour Chemists' Association (at 2 Furnival Street), at 7.30.—F. H. Barry: Indian Products of Interest to the Oil and Colour Chemist.

Optical Society (at Imperial College of Science), at 7.30.—F. Twyman: An Interferometer for the Testing of Camera Lenses.—W. Shackleton: The Testing of Heliograph Mirrors

Röntgen Society (at University College), at 8.15.

### *FRIDAY*, April 15.

Royal College of Surgeons of England, at 5.—Prof. A. Keith: Demonstration of the Contents of the Museum.

### *SATURDAY*, April 16.

Royal Institution of Great Britain, at 3.—Dr. H. H. Dale: Poisons and Antidotes.

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